

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
19 February 2004 (19.02.2004)

PCT

(10) International Publication Number
WO 2004/015086 A3

(51) International Patent Classification:

A61K 35/00 (2006.01) A61K 48/00 (2006.01)
C12N 15/11 (2006.01)

(21) International Application Number:

PCT/US2003/025171

(22) International Filing Date: 8 August 2003 (08.08.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/401, 919 8 August 2002 (08.08.2002) US

(71) Applicant: JOHNS HOPKINS UNIVERSITY [US/US];
3400 North Charles Street, Baltimore, MD 21218 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): RODRIGUEZ, Ron
[US/US]; Johns Hopkins University, 600 North Wolfe st.,
Baltimore, MD 21287 (US). YING, Li [US/US]; Johns
Hopkins University, 600 North Wolfe St, Baltimore, MD
21287 (US).

(74) Agents: CORLESS, Peter, F. et al.; Edwards & Angell,
LLP, P.O. Box 9169, Boston, MA 02209 (US).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC,
SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA,
UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ,
TM), European patent (AT, BE, BG, CH, CY, CZ, DE,
DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL,
PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG,
CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments

(88) Date of publication of the international search report:
29 November 2007

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: ENHANCEMENT OF ADENOVIRAL ONCOLYTIC ACTIVITY IN PROSTATE CELLS BY MODIFICATION OF
THE E1A GENE PRODUCT

(57) Abstract: The present invention relates to compositions and methods for enhancing the oncolytic activity of replication-com-
petent, target cell-specific adenovirus vectors by modification of the E1A gene product. The target cell-specific replication-competent
adenovirus vectors comprise a chimera of an adenovirus gene essential for replication, preferably an early gene, and the Androgen
receptor (or a portion thereof) under the transcriptional control of a cell type-specific transcriptional regulatory element (TRE). By
providing for cell type-specific transcription through the use of one or more cell type-specific TREs, the adenovirus vectors effect
prostate-specific cytotoxicity due to selective replication.

WO 2004/015086 A3